



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/757,897	01/15/2004	Mark Molitor	HOL01 P445	4738
277	7590	11/06/2006	EXAMINER	
PRICE HENEVELD COOPER DEWITT & LITTON, LLP			WILHELM, TIMOTHY	
695 KENMOOR, S.E.				
P O BOX 2567			ART UNIT	PAPER NUMBER
GRAND RAPIDS, MI 49501			3616	

DATE MAILED: 11/06/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 10/757,897	<b>Applicant(s)</b> MOLITOR, MARK	
	<b>Examiner</b> Timothy D. Wilhelm	<b>Art Unit</b> 3616	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 21 August 2006.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-32 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-16, 21, 23-28 and 32 is/are rejected.
- 7) ☒ Claim(s) 18-20, 22 and 29-31 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 15 January 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date <u>1/15/2004</u> . | 6) <input type="checkbox"/> Other: _____  |

### DETAILED ACTION

Examiner acknowledges remarks and amendments submitted by Applicant 8/21/2006. This second action non-final rejection has been made in response to those remarks and amendments.

#### ***Claim Rejections - 35 USC § 102***

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1-9,11-14,21,23,26-28, and 32 are rejected under 35 U.S.C. 102(b) as being anticipated by VanDenberg (5,718,445). VanDenberg discloses a vehicle suspension assembly 1, comprising a first control arm 14 having a first end 35 and a second end, wherein the first end 35 of the first control arm 14 includes a first bushing 28 adapted to pivotally couple the first control arm 14 to a first frame member of a vehicle, and wherein the second end of the first control arm 14 is pivotally coupled to an axle 12 via linkage member 20 which extends upwardly from the axle 12, a second control arm 14 having a first end and a second end, wherein the first end of the second control arm includes a second bushing 28 adapted to pivotally couple the second control arm to a second frame member of a vehicle, and wherein the second end of the second control arm is adapted to be pivotally coupled to the axle 12 of the vehicle via linkage member 20, a rigid, tube-shaped first torsional member 31 coupled to the first

Art Unit: 3616

control arm 14 rearward of the first bushing 28 and forward of the axle 12, and coupled to the second control rearward of the first bushing 28 and forward of the axle 12, a third control arm having a first end and a second end, wherein the first end of the third control arm is adapted to be pivotally coupled to a third frame member 7 of the vehicle, and wherein the second end of the third control arm is adapted to be pivotally coupled to the second frame member of the vehicle, a fourth control arm wherein the first end of the third control arm is adapted to be pivotally coupled to the third frame member 7 of the vehicle, and wherein the second end of the third control arm is adapted to be pivotally coupled to an axle 13, first and second pneumatic suspension bags positioned between the first and second frame members and axle 12, and third and fourth pneumatic suspension bags positioned between the first and second frame members, respectively, and axle 13, and a rigid second torsional member coupled to the third and fourth control arms. The torsional member 31 is situated such that it is proximate the first end 35 of the first control arm 14. The first and second ends of the first, second, and third control arms 14 include elastically deformable bushings 28 which have elongated apertures extending through the center. Regarding claim 21 and its subsequent dependent claims, The suspension system may be viewed such that the first frame member is frame member 7 and the second and third frame members are the longitudinal frame members that were viewed as the first and second frame members for the claims above.

3. With regard to claims 4 and 5, VanDenberg discloses the vehicle suspension assembly 1 described above wherein the first end 35 of the first control arm 14 is

Art Unit: 3616

adapted to be pivotally coupled with a first linkage member 5 that is fixedly attached to and extends downwardly from the first frame member 16, the first end of the second control arm is adapted to be pivotally coupled with a second linkage member, identical to the first, that is fixedly attached to and extends downwardly from the second frame member.

4. Claims 21,23- 28 are rejected under 35 U.S.C. 102(b) as being anticipated by Pierce (5,924,712). Pierce discloses a vehicle suspension assembly, comprising a first control arm 22 having a first end and the first control arm 22 adapted to be pivotally coupled to a first frame member 16 of a vehicle, and wherein the second end of the first control arm is adapted to be pivotally coupled to an axle 44 of a vehicle, a second control arm 22 (opposite side) having a first end and a second end, wherein the first end of the second control arm 22 is adapted to be pivotally coupled to the first frame member 16 of the vehicle, and wherein the second end of the second control 24 arm is adapted to be pivotally coupled to the axle 44 of the vehicle, a tube-shaped, rigid first torsional member 58 coupled to the first control arm 22 along a length of the first control arm 22, and coupled to the second control arm 22 along a length of the second control arm 22, and a third control arm 24 having a first end and a second end, wherein the first end of the third control arm is adapted to be pivotally coupled to a second frame member 12 of the vehicle, and wherein the second end of the third control arm 24 is adapted to be pivotally coupled to the axle 44 of the vehicle. The first ends of the first 22 and second 24 control arms are adapted to be pivotally coupled with first and second linkage members 30 that extend upwardly from the axle 44. The first and second ends

Art Unit: 3616

of the first and second control arms 22 each include an elastically deformable bushing 26,32 and the first and second ends of the third control arm 24 include elastically deformable bushings 28,34.

5. With regard to claim 28 the suspension assembly further includes a fourth control arm 24 having a first end and a second end, wherein the first end of the fourth control arm 24 is adapted to be pivotally coupled to a third frame member 14 of the vehicle, and wherein the second end of the fourth control arm is adapted to be pivotally coupled to the axle 44 of the vehicle.

***Claim Rejections - 35 USC § 103***

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over VanDenberg in view of Mair (6,409,280). Pierce ('12) discloses a vehicle suspension assembly comprising three control arms 24,24,22 and a rigid torsion member 60 coupled to the first and second control arms 24,24. Pierce ('12) discloses the present invention except for the torsional member including a first flanged end and a second flanged end, and the first flanged end being fixedly coupled to the first control arm via at

Art Unit: 3616

least one bolt extending through at least one aperture in the first flanged end and at least one aperture in the first control arm, and the second flanged end being fixedly coupled to the second control arm via at least one bolt extending through at least one aperture in the second flanged end and at least one aperture in the second control arm.

Mair teaches truck and trailer hub comprising an axle with a flanged end flanged end 20 that is fixedly coupled to a wheel assembly via a plurality of bolts 21 extending through corresponding apertures in the flange and wheel assembly. This is a commonly known means of coupling one object to another. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to apply the teachings of Mair of the flanged tube connection to the two ends of the tube-shaped torsion member to create more secure and rigid attachments of the torsion member to the control arms.

8. Claims 15 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over VanDenberg in view of Bell (1,984,565). VanDenberg discloses the present invention except for the first and the second control arms 24,24 being substantially L-shaped defining an elbow along the length of each of the control arms, and on the elbow of which the torsion bar is connected. Bell teaches a vehicle wheel suspension assembly with L-shaped control arms 31 on which a bar 29 is connected to the elbow. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to have applied the teaching of Bell of L-shaped control arms to the vehicle suspension assembly of Pierce ('12) and to have coupled the torsion bar to the elbows of the first and second control arms to allow for the torsion member to be coupled to the

control arm at a spot other than the connecting point between the control arm and the vehicle frame member while still being connected to the end of the control arm.

9. Claim 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over VanDenberg et al in view of Goby (2,823,927). VanDenberg discloses the present invention except for control arms with forked ends. Goby teaches a vehicle suspension system 1 comprising at least one control arm 4, the end of which is fork-shaped and attached to the vehicle's axle 7. It would have been obvious to one of ordinary skill in the art at the time of the invention to apply the teachings of Goby's fork-shaped control arm to the vehicle suspension assembly of VanDenberg et al to reduce friction between the axle and the control arm.

#### ***Allowable Subject Matter***

10. Claims 18-20,22, and 29-31 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

#### ***Conclusion***

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Timothy D. Wilhelm whose telephone number is 571-272-6980. The examiner can normally be reached on 9:00 AM to 5:30 PM Monday through Friday.

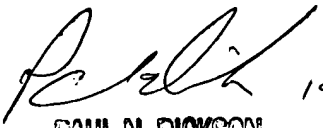


Art Unit: 3616

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Paul Dickson can be reached on 571-272-6669. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

TDW

 10/30/06  
PAUL N. DICKSON  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 3600